

JOINT-OFFICE OPERATION ON WATER SEEPAGE IN BUILDINGS

Executive Summary

1. Mostly owing to defective water pipes, sanitary fitments and drainage pipes, and deteriorated waterproofing of floor slabs, rooftops and external walls, water seepage in buildings may cause nuisances, health problems, building-safety issues and at times water wastage. In addition to the originating flat, these problems may extend to adjacent and underlying flats. Under the Public Health and Municipal Services Ordinance (Cap. 132 — PH&MS Ordinance), the Food and Environmental Hygiene Department (FEHD) may issue a nuisance notice requiring the responsible person of any premises, drain or sewer which is in such a state as to be a nuisance, or injurious or dangerous to health to take actions to abate the water seepage within a specified period.

2. Upon noting water seepage in a flat which is suspected to be originated from an upper-floor or an adjacent flat, the affected flat owner may seek to resolve the problem by approaching and liaising with the pertinent flat owners to carry out necessary investigations and repair works. The affected flat owner may also refer a water-seepage case to the Government for assistance. In response, the FEHD may carry out investigations to trace the source of the seepage and, upon identifying the source, issue a nuisance notice (see para. 1).

3. In July 2006, a joint-office (JO) operation comprising staff of the FEHD and the Buildings Department (BD) was set up in offices of all the 19 FEHD districts to handle water-seepage cases. The JO operation aimed to improve coordination of FEHD and BD staff. FEHD staff had the enforcement power under the PH&MS Ordinance and BD staff possessed building-survey expertise. The main objectives of the JO operation were to shorten the time of investigation of water-seepage cases reported by the public and improve the success rate of identifying the seepage source of these cases. The Audit Commission (Audit) noted that the number of public reports on water-seepage cases had increased by 70% from 17,405 cases in 2007 to 29,617 cases in 2015.

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4. In 2014-15, the total cost of the JO operation was \$129 million, comprising staff cost of \$97 million, and office expenditure and cost of hiring contractors (for carrying out water-seepage investigations) totalling \$32 million. As of March 2016, 274 staff (comprising 211 FEHD JO staff and 63 BD JO staff) were involved in the JO operation. Audit has recently conducted a review to examine the efficiency and effectiveness of the JO operation in handling water-seepage cases with a view to identifying areas for improvement.

Investigation and enforcement actions

5. As of December 2006, there were 6,228 outstanding cases. After the setting up of the JO operation in all the 19 districts in 2006, from January 2007 to March 2016, the JO operation had received a total of 231,968 reports on water-seepage cases (or about 2,100 cases a month). As of March 2016, of the 238,196 (6,228 plus 231,968) cases, actions on 196,926 (83%) cases had been completed, and 15,564 (6%) were outstanding cases with investigations in progress. The shortfall of 25,706 (11%) cases was due to record-keeping discrepancies between the number of cases captured in the FEHD's Complaints Management Information System (CMIS) and that in the FEHD JO monthly returns and BD JO case records. Of the 196,926 completed cases: (a) 97,296 (49%) were screen-out cases where investigations would not be carried out due to certain reasons such as the water seepage being at a level not meeting the moisture-content threshold; (b) 40,856 (21%) were cases where the water seepage had ceased or the informants had withdrawn case reports during investigations; (c) 41,024 (21%) were cases where the seepage source was successfully identified by the JO operation; and (d) 17,750 (9%) were cases where the seepage source could not be identified after conducting investigations. According to the formula adopted by the FEHD and the BD, the success rate of identifying the source of water-seepage cases completed from January 2007 to March 2016 was 41% ($41,024 \div (41,024 + 17,750 + 40,856) \times 100\%$) (paras. 1.17, 2.3 and 2.10).

6. ***Deteriorating source-identification success rates.*** Notwithstanding that one of the main objectives of the JO operation was to improve the success rate of identifying the seepage source of water-seepage cases (see para. 3), according to the formula adopted by the FEHD and the BD (see para. 5), the success rate of cases requiring investigations had decreased progressively from 46% in 2007 to 36% in 2015 (paras. 2.9 and 2.10).

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7. ***Long time taken to handle some water-seepage cases.*** Despite the fact that a key objective of the JO operation was to shorten the time of investigation of water-seepage cases (see para. 3), Audit examination revealed that it took a long time for the JO operation to process some water-seepage cases. In this connection, of the 28,332 cases having actions completed from April 2015 to March 2016, the time taken to complete 9,710 (34%) cases had exceeded the 133-day reference timeframe set by the FEHD and the BD. In particular, 643 (2%) cases took 2.2 to 7.5 years to complete. Furthermore, of the 15,564 outstanding cases as of March 2016, 6,368 (41%) cases had been outstanding for more than 133 days, where the time having been spent on 1,046 (7%) cases ranged from 2.2 to 8.3 years (paras. 1.9, 2.17, 2.18 and 2.22).

8. ***Inadequate system for referring cases to BD and WSD for follow-up actions.*** During investigations of water-seepage cases, FEHD JO staff and/or BD JO staff would carry out preliminary assessments and refer cases involving building-safety issues to the BD and cases involving leaking of water-supply pipes to the Water Supplies Department (WSD) for further investigations and necessary enforcement actions under the Buildings Ordinance (Cap. 123) and the Waterworks Ordinance (Cap. 102) respectively. Audit examination revealed that, although FEHD guidelines required FEHD JO staff to maintain a list of cases having been referred to the BD and the WSD for follow-up actions, the staff of 8 of the 19 districts did not maintain such a list. Moreover, while the WSD had received 2,240 cases having been referred from the JO operation from 2011 to 2015 for follow-up actions, the records of the JO operation showed that only 728 (33% of 2,240) cases had been referred to the WSD during the period (paras. 2.28, 2.29 and 2.31).

9. ***Lack of system control over investigations and issuance of nuisance notices.*** From 2011 to 2015, the JO operation had successfully identified the seepage source of 22,439 water-seepage cases and had served 20,729 nuisance notices on the responsible persons. The FEHD promulgated an instruction in March 2008 requiring JO staff of the 19 districts to maintain in each district a Water-seepage Case Monitoring Database by using standalone computers for monitoring the progress of actions taken on each water-seepage case. Information for inclusion in the Database included the date of: (a) conducting a coloured-water test; (b) inspecting the test results; (c) issuing a nuisance notice and its expiry date; and (d) conducting a compliance inspection of a nuisance notice issued. However, information of the Database could not be provided for Audit examination. The absence of the related records and information had impeded the FEHD's monitoring

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and management of investigations and issuance of nuisance notices on water-seepage cases, as well as Audit's examination of the completeness and timeliness of actions taken by the JO operation in conducting investigations and issuing nuisance notices on water-seepage cases (paras. 2.42, 2.46, 2.47 and 2.49).

10. ***Lack of system control over follow-up actions on nuisance notices.*** According to FEHD guidelines, JO staff of each district needed to maintain a Nuisance Notices Monitoring List. However, Audit examination revealed that JO staff of 14 of the 19 districts did not maintain information in the Monitoring Lists on one or more of the following items: (a) the date of serving a nuisance notice; (b) the date of expiry of a nuisance notice; and (c) the dates of conducting follow-up inspections to ascertain compliance with a nuisance notice. Moreover, Audit also noted that none of the Monitoring Lists of the 19 districts comprised information on the results of compliance inspections and the dates of referring cases to the FEHD Prosecution Section for taking enforcement actions. The absence of the related records and information had impeded the FEHD's monitoring and management of follow-up actions on nuisance notices served, and Audit's examination of the completeness and timeliness of the related actions (paras. 2.50 and 2.52 to 2.55).

Monitoring of service contractors

11. To supplement staff resources, BD JO staff engaged and monitored service contractors to assist in carrying out investigations of water-seepage cases. Service contractors were required to submit bi-weekly progress reports to BD JO staff to show the progress of actions taken on each assigned case. As of March 2016, 7 contractors had been appointed under 9 service contracts to provide water-seepage investigation services for the 19 FEHD districts (paras. 1.10 and 3.3).

12. ***Inadequate monitoring and assessment of contractors' effectiveness.*** Service contractors were mainly engaged to carry out investigations with a view to identifying the source of seepage of water-seepage cases. However, in monitoring and assessing a contractor's performance, BD JO staff did not compile and make reference to the contractor's success rate of identifying the source of seepage of cases assigned to him. Audit examination revealed that there were large variations among the success rates of the nine contracts covering the period April 2014 to April 2015, with the rates ranging from 23% to 67% (paras. 3.6, 3.7 and 3.9).

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13. ***Lack of effective actions taken against contractors for taking a long time to complete investigations.*** Audit examination revealed that some contractors had taken a long time to complete investigations of cases assigned to them. For example, as of April 2016, of the 8,327 cases of the nine contracts covering the period April 2014 to April 2015 where investigation reports had been submitted to BD JO staff, the time taken to complete 281 (3%) cases ranged from 1.1 to 1.9 years. Furthermore, a target timeframe had been specified in the contract for a contractor to complete an inspection of the affected premises and carry out necessary tests within 30 days from assignment of a case. However, Audit examination revealed that, as of April 2016, of the 5,457 cases of contracts covering the period April 2014 to April 2015 where actions on inspection of the affected premises and tests had been completed, 3,337 (61%) cases did not meet the 30-day target timeframe. In particular, the time taken for 85 (2%) cases to complete this task ranged from 1.1 to 2.1 years. However, the BD had not issued any warning letter or adverse performance report to related contractors from January 2011 to April 2015 (paras. 3.13 to 3.15, 3.18 and 3.21).

Management information system and performance reporting

14. ***FEHD JO staff not fully adopting new CMIS for water-seepage cases.*** In July 2012, the FEHD engaged a contractor at a cost of \$7.3 million to develop a new CMIS to facilitate the handling of all FEHD enquiry and complaint cases, including water-seepage cases. The new system was rolled out by phases for implementation in the 19 districts from December 2014 to December 2015. The new CMIS provided new functions for storing scanned copies of case documents, generating exception reports highlighting cases not complying with timeframes and generating ageing analysis reports on long-outstanding cases. However, JO staff of the 19 districts did not fully implement the new CMIS. For example, they did not input into the new CMIS the dates of conducting tests and inspections, and issuing nuisance notices of water-seepage cases, causing inefficiency for the management to monitor performance and progress of the cases (paras. 4.2, 4.4 to 4.6 and 4.9).

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15. *Need to consider setting additional performance targets.* While informants of water-seepage cases and members of the public are mostly concerned about the time taken by the JO operation in identifying the source of seepage of water-seepage cases and the extent to which the JO operation could successfully identify the source of seepage, the FEHD and the BD have not set performance targets in these two areas (para. 4.22).

Audit recommendations

16. **Audit recommendations are made in the respective sections of this Audit Report. Only the key ones are highlighted in this Executive Summary. Audit has *recommended* that the Government should:**

Investigation and enforcement actions

- (a) **strengthen measures with a view to ensuring that the JO operation actions on water-seepage cases are completed in a timely manner (para. 2.34(c));**
- (b) **periodically send a list of referral cases to the WSD and the BD for reconciliation purposes (para. 2.34(e));**
- (c) **take measures to ensure that BD JO staff take actions on outstanding cases in a timely manner (para. 2.36(a));**
- (d) **take necessary actions to ensure that Water-seepage Case Monitoring Databases are properly maintained by the JO staff (para. 2.58(a));**
- (e) **issue clear guidelines on essential information for inclusion in Nuisance Notices Monitoring Lists (para. 2.58(b));**

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Monitoring of service contractors

- (f) **take actions to ensure that contractors' investigations on water-seepage cases are completed in a timely manner, and warning letters and adverse performance reports are issued to contractors having unsatisfactory performance (para. 3.33(a));**

Management information system and performance reporting

- (g) **take measures to ensure that all functions of the new CMIS on water-seepage cases are fully implemented for the JO operation in a timely manner (para. 4.13(a)); and**
- (h) **consider regularly publishing performance indicators for the JO operation (para. 4.24).**

Response from the Government

- 17. The Government agrees with the audit recommendations.